Project Id: UY6758GH

Task: Develop a Personal Finance Management Application
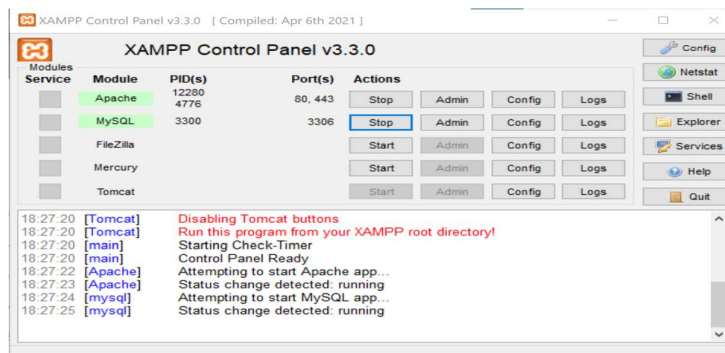
Objective:

Create a command-line application that helps users manage their personal finances by tracking income, expenses, and generating financial reports.
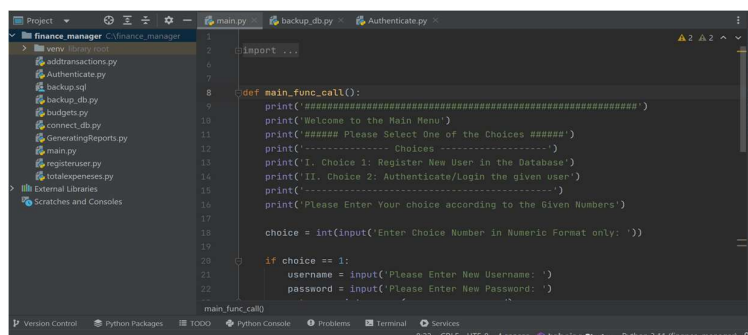
About:

- The Personal Finance Management Application is a command-line application that is developed using Python and MySql on the basis of tasks allocated.
- This Project Document outlines the detailed usage of each module in the Finance Management Application and screenshots are also attached with the given features.
- The Project is Built upon Window System with Python 3.11 version along with Xampp Control Panel version v3.3.0.
- For running the Project, any machine user requires these basic requirements setup.
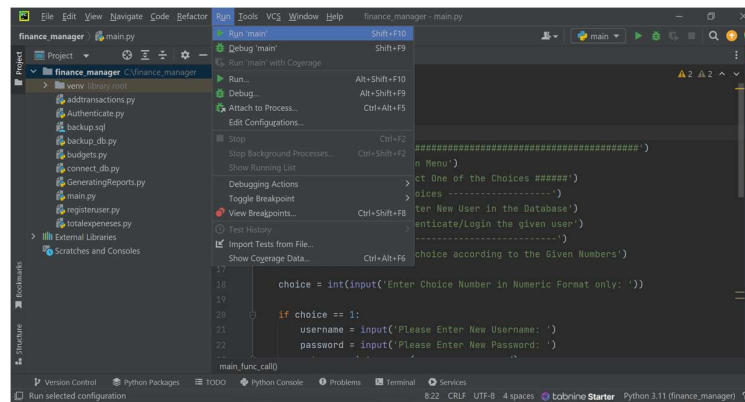
User Manual:

1. The first and foremost requirement before starting the project is to make sure that Xampp[MySql] is running in the Background otherwise it will lead to background errors in further when run the application.
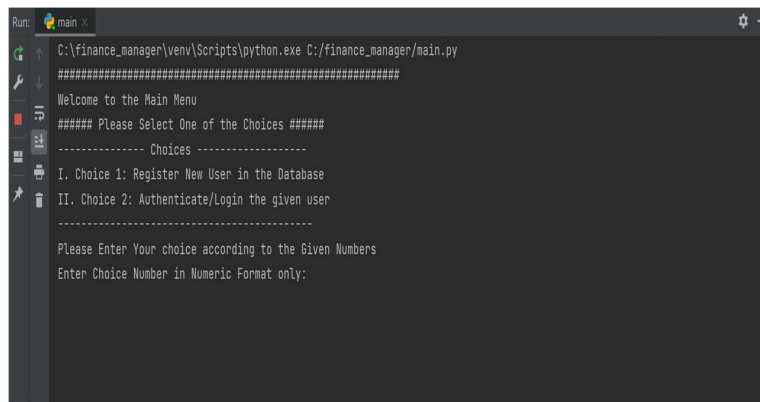

2. After starting the xampp and running the pycharm is to locate the main.py file.
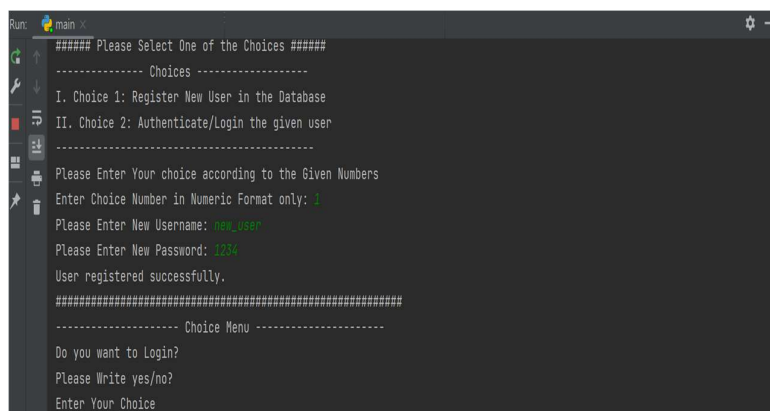
3. The,Next Step is to run the main.py File in the Terminal .

4. After Running the Main File In Pycharm Terminal the Main Menu Section of the Project will appear with details given as well on how to run the system.

5. For creating the new user, a user has to enter 1 and has to enter the username and password and the new user will be created in a database automatically as well.

    I. After Creating, New a user can log in directly after a new user is created or can rerun the file as well to log in by selecting choice 2.

6. After selecting the choice 2, users have to fill in his/her credentials and if the credentials are correct, the user will be granted access to the system for further operations, otherwise he/she will not be able to get the access due to invalid credentials.

NOTE: After Successful Login, a user will also be displayed his user_id that he she/must write down or save to perform operations further. Without correct user_id, users will not be able to perform the operations.

7. Now, the user can select multiple options among the available choices to perform the operations.

NOTE:Choices should be Numeric only between 1 and 5 .Other wise system will raise the errors.

8. For Creating New Transactions and other Transaction options, select 1.

```
Enter Choice: 1
########################################################
-------------------- Transaction Menu --------------------
# Choice 1: For adding a new transaction in the database, press 1
# Choice 2: For adding a Expenses in the database, press 2
# Choice 2: For updating an existing transaction in the database, press 3
# Choice 3: For deleting an existing transaction in the database, press 4
Please Enter your choice:
```

I. For Creating New Transaction for the user in the Database Press 1. Example Format for Adding the choice for the user is also Given .

```
Please Enter your choice: 1
###########################################################
---------------- Adding New Transaction ----------------
Format for adding a new transaction should be like this:
1 income August Salary 5000 Monthly salary 2023-08-01
Please Enter user_id: 11
Please Enter Transaction Type: income
Please Enter Category: September Salary
Please Enter the amount: 10000
Please Enter the Description: Monthly Salary
Please Enter the Date in Format (YYYY-MM-DD): 2024-09-09
Transaction inserted successfully.
```

II. For Adding Expenses User has to Select Choice 2.

```
Please Enter your choice: 2
############################################################
---------------- Adding Expenses ----------------
Example for updating an existing transaction can be like this:
1, expense, 50.75, Grocery Shopping,2023-08-01
Please Enter your existing user_id: 11
Please Enter Expenses category expense
Please Enter the Expenses amount: 120000
Please Enter the Expense description: Grocery
Please Enter the Date in Format (YYYY-MM-DD): 2024-08-12
Expensed Added successfully.
```

III. **Similarly, for Updating and Deleting a Transaction, User can select options 3 and 4 in the choice menu.**

9. Similarly, for Generating Monthly and Yearly Reports, users have to select Option2

```
--------------- Select Choices -----------------
# Choice 1: Transaction-Based Choices
# Choice 2: Generate Reports
# Choice 3: Calculate Total Income, Expenses, and Savings
# Choice 4: Setting and Checking Your Budget
# Choice 5: For Back and Restore the Database.
Enter Choice: 2
########################################################
--------------------Reports Menu--------------------
#Choice1: For Printing Monthly Reports press 1
#Choice2: For Printing Yearly Reports press 2
Please Enter Your Choice
```

I. For Generating Monthly Reports.

```
--------------------Reports Menu--------------------
#Choice1: For Printing Monthly Reports press 1
#Choice2: For Printing Yearly Reports press 2
Please Enter Your Choice1
Example Format is "generate_monthly_report(1, 8, 2023)"
Please Enter Your User Id11
Please Enter the Month Number to get its Reports9
Please Enter the Year Number2024
[('September Salary', 'income', Decimal('10000.00'))]
########################################################
```

II. For Generating Yearly Reports.

```
2########################################################
--------------------Reports Menu--------------------
#Choice1: For Printing Monthly Reports press 1
#Choice2: For Printing Yearly Reports press 2
Please Enter Your Choice2
Example Format is "generate_monthly_report(1,2023)"
Please Enter Your User Id11
Please Enter the Year Number2024
[('expense', 'expense', Decimal('120000.00')), ('September Salary', 'income', Decimal('10000.00'))]
########################################################
```

10. Similarly, Calculating For Total Income and Expenses Choose Choice 3.

```
Enter Choice: 3
####################################################
--------------- Calculate User Expenses and Savings ---------------
Please Enter the user id to calculate all the user summaries and expenses as well as saving11
Financial Summary for User ID 11:
Total Income: $10000.00
Total Expenses: $120000.00
Total Savings: $-110000.00


Process finished with exit code 0
```

11. Similarly, For Setting and Checking Budget Choose Choice 4.

    I.   Setting the Budget.

```
##########################################################
-------------------- Budget Menu --------------------
#Choice1: For Setting Budget press 1
#Choice2: For Checking Budget press 2
Please Enter Your Choice1
Example Format is "(1, income, 300)"
Please Enter Your User Id11
Please Enter the Category in income format onlyincome
Please enter your monthly limit1400
Budget Added successfully.
##########################################################
```

    II.   Checking the Budget.

```
####################################################
-------------------- Budget Menu --------------------
#Choice1: For Setting Budget press 1
#Choice2: For Checking Budget press 2
Please Enter Your Choice2
Example Format is check_budget(1)
Please Enter Your User Id6
Alert: Budget exceeded in income category! Spent 25000.00, Budget 1200.00
####################################################
```

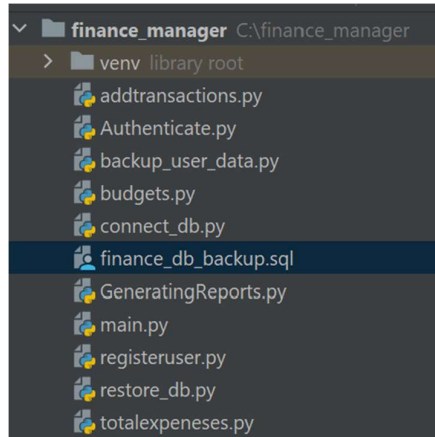12. Similarly, For Backing Up the Database Choose Choice 5.

    I.   After Successful Backup of DataBase a successful Message will be Displayed.
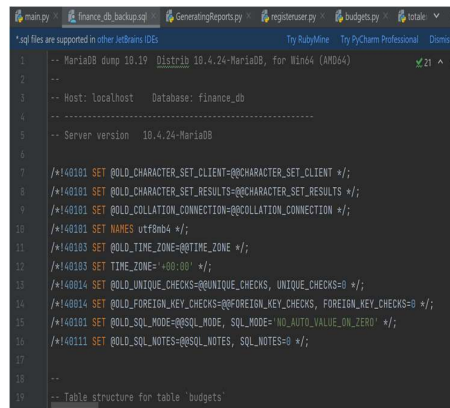
```
main
# Choice 4: Setting and Checking Your Budget
# Choice 5: For Backup the Database.
# Choice 6: For Restoring the Database.
Enter Choice (1-6): 5
Backup of finance_db successful. Saved as finance_db_backup.sql

Process finished with exit code 0
```
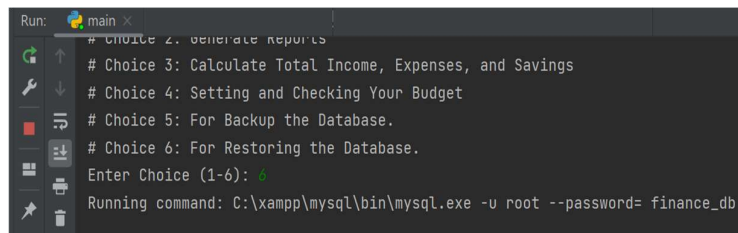
    II.   A new File with the name "**finance_db_backup**" will be created in a project folder that contains the backup of the original database.

III.   Now you can also check file "**finance_db_backup**" which contains the database backup.

13. Similarly, For Backing Up the Database Choose Choice 6.

After Successful Backup of the Database the success message will be completed and file will be created in project folder as well that user can import in Db as well.